

## PROVISIONAL COPY

## PATENT SPECIFICATION



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612,162

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Index at acceptance:—Class 36, D1(a : d).

## PROVISIONAL SPECIFICATION.

**A New or Improved Method of, and Means for, Installing Electric Wiring Systems, and the like.**

I, HARRY WILLETS, a British Subject, of 9, Chawnhill, Stourbridge, Worcestershire, do hereby declare the nature of this invention to be as follows:—

5 This invention has reference to a method of, and means for, installing electric wiring systems, more particularly for installing such systems in finished structures wherein no electric wiring exists or wherein existing wiring is to be replaced.

The principal object of the present invention is to simplify and reduce the costs of installations and also to simplify and reduce the costs of the fittings required to 10 instal a wiring system.

In accordance with one aspect of the present invention, the method of installing an electric wiring system consists in running the flexibles or cables through the premises 20 to be wired, enclosing the said flexibles or cables in metal channelling and anchoring the channelling to wall surfaces.

In accordance with an alternative aspect of the present invention, the means for installing an electric wiring system in an existing building, comprises lengths of 25 metal channel for receiving the flexibles or cables and spring metal clips adapted to be secured to wall surfaces and to receive or 30 secure the metal channel.

Preferably this metal channel is of oval shape in cross-section, the side thereof to be fitted against a wall surface being removed to permit of the ready insertion therein of 35 any flexible or cable which it is to contain. Such a metal channel may be produced easily and quickly from metal strip by curling over the edges of the latter in any desired manner, for example by a rolling

operation.

The clips for securing the channel in position after the passage of one or more flexibles or cables through the open side of the latter, may also consist of a metal strip, the edges of which are curled over so that they are adapted to embrace the channel; the side opposite the mouth formed between the curled edges preferably being formed with one or more holes for the passage of wood screws or like fixing means to enable each clip to be mounted, mouth outwards, upon a wall surface.

When installing a wiring system, the flexibles or cables may be run through the building or premises, the necessary number of clips may be mounted on the wall surface, the flexibles or cables may be inserted successively into lengths of the metal channel and the latter may then be fixed in position by merely pressing them into the mouths of the complementary clips.

If desired, the channel and clips may be utilised for purposes other than shrouding electric flexibles or cables as described above; for example the metal channels may be used as beading in panel work in vehicles or buildings; in such circumstances the said channels may again be fixed in position by clips or they may be drilled at intervals along their length and fixed direct to the wall surfaces by wood screws or like fixing means.

Dated the 18th day of May, 1945.

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## COMPLETE SPECIFICATION.

**A New or Improved Method of, and Means for, Installing Electric Wiring Systems, and the like.**

I, HARRY WILLETS, a British Subject, of 9, Chawnhill, Stourbridge, Worcestershire, [Price 2/-]

do hereby declare the nature of this invention and in what manner the same is to be

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performed, to be particularly described and ascertained in and by the following statement:—

This invention has reference to a method 5 of, and means for, installing electric wiring systems or the like; more particularly for installing such systems in finished structures wherein no electric wiring exists or wherein existing wiring is to be replaced.

10 It has already been proposed to use as electric wiring conduit, two over-half-circle open sided tubes, one of which is mounted, open side outwards, upon a wall or the like, and, after insertion of the flex or cable in

15 the mounted tube, an identical tube is sprung, open side inwards, upon the said mounted tube. It has also been proposed to cover electric wiring flex or cable by lengths of corrugated metal strip which are mounted upon the wall or the like, by passing fixing screws or equivalent expedients through a strip portion intermediate the corrugations with the flex or cable located under and extending along the said corruga-

20 tions.

25 The principal object of the present invention is to simplify and reduce the costs of installation and also to simplify and reduce the costs of the fittings required to instal a

30 wiring system.

In accordance with one aspect of the present invention, the method of installing an electric wiring or other similar system consists in running the flexibles, or cables 35 through the premises to be wired, enclosing the said flexibles or cables in open-sided or channel-section conduit, and anchoring the conduit, open-side inwards, to a wall or like supporting surface by springing the said conduit into spring-metal and channel section clips previously secured, open-side outwards, to the said supporting surface.

In accordance with an alternative aspect 45 of the present invention, the means for installing an electric wiring or other similar system in, for example, an existing building, comprises lengths of open-sided or channel-section conduit and spring-metal channel-section clips, the latter being adapted to be secured, open-side outwards, upon a wall or like supporting surface and to receive and retain the conduit, open-side inwards, upon the said surface.

55 Preferably the channelled conduit is of oval shape in cross-section, the side thereof to be anchored against a wall or like surface being slotted lengthwise to permit of the ready insertion therein of a length of flexible or cable which it is to accommodate and enclose. Such a conduit may be produced easily and quickly from metal strip by curling over the edges of the latter in any desired manner, for example by a rolling operation.

60 65 Each clip for use in securing a conduit

in position after the passage of one or more flexibles or cables through the slotted or open side of the latter, may also consist of a metal strip, the ends of which are curled over so that they are adapted to embrace and retain the conduit, the side opposite the mouth formed between the curled edges preferably being formed with one or more holes for the passage of wood screws or like fixing means to enable each clip to be mounted, mouth outwards, upon a wall or like surface.

The installation means may also comprise or include, angle, tee, four-way and like fittings each consisting of a piece of sheet metal, the arms or branches of the said fittings having their edges rolled or otherwise turned over to enable them to be sprung on to an end of a complementary conduit.

In order that the invention may be more readily understood and carried into practice, reference will now be made to the accompanying drawings, wherein:—

Figure 1 is a perspective view of part of a wiring system.

Figure 2 is a rear perspective view of a portion of a flexible, or cable-receiving conduit.

Figure 3 is a front perspective view of a conduit-anchoring clip.

Figure 4 is a rear perspective view of an angle piece for attachment to and between the ends of two lengths of conduit.

Figure 5 is a rear perspective view of a tee piece for attachment to and between the ends of three lengths of conduit.

It can readily be appreciated from Figure 1, that the wiring system illustrated in the drawings, comprises a system of metal conduits 1 of channel section which are anchored to a wall or any other like supporting surface by inserting each conduit, mouth inwards, into two or more metal clips 2 previously secured to the said supporting surface by wood screws or like fixing means passed through holes 3 in the walls or bases of the clips into the said wall or the like.

Where it is desired to arrange two conduits at right angles to one another, the adjacent ends of the said conduits may be interconnected, subsequently to the anchoring of the said conduits to the supporting surface, by an angle-piece 4 which is applied to and extends between the said adjacent ends. Similarly, a tee-piece 5 may be applied to the adjacent ends of three separate conduits when it is desired to arrange one conduit as a branch from and at right angles to, two aligned conduits. Also, if two branches are to be taken in opposite directions from and at right angles to two aligned conduits, a piece having four arms arranged at 90° 130

apart, may be applied to the adjacent ends of the four conduits.

Each conduit 1 consists of a metal strip which is rolled or otherwise turned over 5 along each edge to form a unit which is substantially oval shape in cross section and which is formed with a slot 1a along the entire length of one side thereof.

Each clip 2 also consists of a length of 10 metal strip, the ends of which are rolled or otherwise turned over to give the strip an open-sided oval shape in cross-section. The clip is of such a size and its mouth 2a is of such dimension between the said 15 turned-over ends, that when a conduit 1 is presented, slotted-side forwards, to the clip, the said ends are sprung open by the rounded edges of the conduit, to allow the latter to pass into the clip and be resiliently retained therein by the turned over ends of the clip. It is preferable that each conduit should be inserted into and retained by at least two clips 2 spaced apart upon the 20 surface to which the conduit is to be anchored.

Each angle piece 4 is also formed from strip metal and the free or outer end of each arm is provided at each edge thereof with an ear 4a which imparts to the end 30 a cross-sectional shape and dimension the same as that of a clip 2. Hence each end of the angle piece is adapted to be sprung on to and be retained by an end of a conduit 1 (as shown in Figure 1). Similarly, 35 the edges of the free end of each arm of a tee-piece 5 are provided with ears 5a whereby the said tee-pieces may be sprung onto and be resiliently retained by three separate conduits (see Figure 1). Also when it 40 is desired to instal a four-way piece each of the four arms of the said four-way piece may be provided with ears identical to the ears 4a and 5a. The tee, four-way and other multi-way pieces may be produced by 45 stamping them from sheet metal and subsequently rolling or otherwise turning over the edges of the arm ends to produce the conduit-gripping ears.

When installing a wiring system, the 50 flexibles or cables 6 may be run through the building or premises as and where desired; the necessary number of clips 2 are mounted on the wall or other supporting surface and the flexibles or cables are 55 inserted successively into and enclosed by separate conduits 1. As each conduit receives a flexible or cable, or a portion of a flexible or cable, it is anchored to the said surface merely by pressing it through the 60 mouths 2a of two or more previously assembled clips; finally angle pieces 4, tee-pieces 5 and four or other multi-way pieces are assembled to the anchored conduits, as and where required.

If desired, the conduits, clips, angle and

multi-way pieces may be utilised for purposes other than enclosing the electric flexibles or cables of a wiring system as described above; for example, they may be used as beading for panel work in vehicles or buildings.

Having now particularly described and ascertained the nature of my said invention, and in what manner the same is to be performed, I declare that what I claim is:—

1. The method of installing an electric wiring or other similar system in, for example, an existing building, which consists in running flexibles or cables through the premises to be wired, enclosing the said flexibles or cables in open-sided or channel-section conduit; and anchoring the conduit, open-side inwards, to a wall or like supporting surface by springing the said conduit into spring-metal and channel-section clips previously secured, open-side outwards, to the said supporting surface.

2. Means for installing an electric wiring or other similar system in, for example, an existing building, comprising lengths of open-sided or channel-section conduit and spring-metal channel-section clips, the latter being adapted to be secured, open-side outwards, upon a wall or like supporting surface and to receive and retain the conduit, open-side inwards, upon the said surface.

3. Means for installing an electric wiring or other system as claimed in Claim 2 wherein each conduit is of oval shape in cross section, the side thereof to be anchored to the supporting surface being slotted lengthwise thereof.

4. Means for installing an electric wiring or other system as claimed in Claim 2 wherein each clip consists of a metal strip the ends of which are curled over to give it an open-sided oval shape, the ends being spaced apart by a distance sufficient to enable a conduit to be accommodated and retained therebetween.

5. Means for installing an electric wiring or other system as claimed in Claim 2 and wherein each clip is formed with one or more holes in its base whereby it is adapted to be mounted on the supporting surface by a similar number of wood screws or equivalent expedients.

6. Means for installing an electric wiring or other system as claimed in any of Claims 2—5 comprising angle, tee or multi-way metal pieces, each arm of which is provided at its free end and on each edge thereof, with a curled ear, the two ears on each arm being spaced apart by a distance sufficient to enable a conduit to be accommodated therebetween.

7. A method of installing an electric wiring system substantially as herein described.

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8. An electric wiring or other system substantially as herein described and shown in the accompanying drawings. Dated the 13th day of May, 1947.  
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612,162 COMPLETE SPECIFICATION

1 SHEET

*[This Drawing is a reproduction of the Original on a reduced scale.]*

FIG.1.

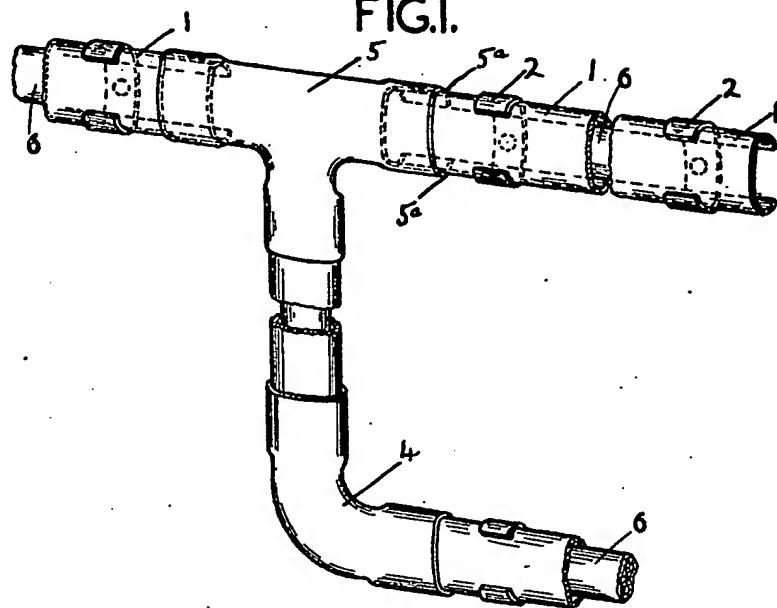


FIG.2.

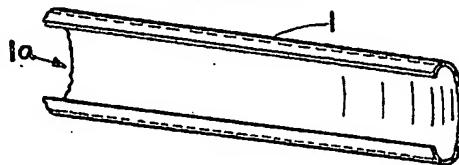


FIG.3.

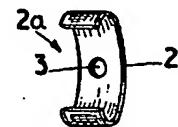


FIG.4.

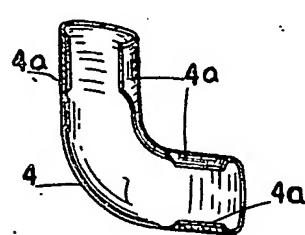


FIG.5.

